DATA ITEM DESCRIPTION

Form Approved
OMB NO.0704-0188

1. TITLE	2. IDENTIFICATION NUMBER
MAPPING	P013 (Amend 0007)

3. DESCRIPTION/PURPOSE

The Contractor shall maintain accurate system mapping.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE

7. APPLICATION/INTERRELATIONSHIP

This Data Item Description (DID) contains the content and requirements for providing mapping of the utility distribution systems.

8. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER

10. PREPARATION INSTRUCTIONS

10.1 Maps shall meet the requirements of 49 CFR 192 and 16NYCRR Part 255. A base set of maps shall be developed, starting with the existing electronic map file provided if possible. The maps shall be updated as necessary to depict the system to its current extent and configuration to include pipe and component location, size, material, age, operating pressure and condition. The maps shall show the location of all system components that are required to be included in the inventory with the component's feature ID shown on the drawings. Map notes shall document pipe or line size and material type.

10.2 All submittals required under this DID will be itemized on an Engineering Form 4025 attached. Three hard copies and an electronic copy shall be submitted. Electronic files of documents shall be in the most current version of Microsoft and if necessary saved in earlier versions compatible with USMA software. All maps and drawings shall be submitted in ArcView and AutoCAD in a version compatible with USMA's software.

10.3 USMA will provide existing maps in electronic media format with thirty (30) days of contract award. Revised and updated maps will be constructed/developed by revising the existing electronic files and shall show planimetric features identifiable on or interpretable from the existing maps, aerial photographs, and from field surveys. Maps shall be drawn to scale equaling those provided as reference. No updates of existing mapping are required for existing errors in geographical features or locations of buildings and roads.

10.4 All submittals required under this DID will be itemized on an Engineering Form 4025 attached. Three hard copies and an electronic copy shall be submitted. Electronic files of documents shall be in the most current version of Microsoft and if necessary saved in earlier versions compatible with USMA software. All maps and drawings shall be submitted in ArcView and AutoCAD in a version compatible with USMA's software. The Contractor shall provide up to date system maps in hard copy and electronic form in draft form during development, when complete and annually thereafter.

10.5 The following information, as a minimum, shall be included on the drawings:

Overhead electrical system
- Poles
- ***Feature ID***

11. DISTRIBUTION STATEMENT

10. PREPARATION INSTRUCTIONS – 10.5 (continued)

Location by symbology

- Transformers
Feature ID
Location by symbology
Contain an overlaying layer that depicts: (1) capacity; and (2) deficient components by color coding

- Pole mounted switchgear
Feature ID
Location by symbology
Contain an overlaying layer that depicts deficient components by color coding

- Voltage regulators
Feature ID
Location by symbology
Contain an overlaying layer that depicts deficient components by color coding

- Overhead conductor
Document number of conductors in each circuit (phases), material, and conductor size of each circuit segment through the use of different line styles and legend notes.
Date installed (Date shall be denoted on maps by creating a layer that color codes map sections by date installed; confirmed by interview, as-built drawings, or assumed if no confirming data is available).
Maps shall contain separate overlaying layers: one for primary conductor, and one for secondary conductors.
Maps shall contain an overlaying layer that depicts the location of system deficiencies (by color-coding) such as deterioration; capacity limited sections, excess voltage drop or other deficiencies.
Notes shall be included to document the condition and reasons for its color classification.

Aerial services
Document location of services, point they contact buildings, the number of conductors in each service, material, and size through the use of either different line styles and legend notes or text labels.
Maps shall contain an overlaying layer that depicts the location of system deficiencies (by color-coding) such as deterioration; capacity limited sections, excess voltage drop or other deficiencies.
Notes shall be included to document the condition and reasons for its color classification.

Capacitors,
Feature ID
Location by symbology
Contain an overlaying layer that depicts deficient components by color coding

Streetlights
Feature ID
Location by symbology
Contain an overlaying layer that depicts deficient components by color coding

Underground electrical system
Transformer
Feature ID
Location by symbology
Contain an overlaying layer that depicts: (1) capacity; and (2) deficient components by color coding

Pad mounted switchgear.

Feature ID
Location by symbology
Contain an overlaying layer that depicts deficient components by color coding

Electric Manholes (number & location)
Feature ID
Location by symbology
Contain an overlaying layer that depicts deficient components by color coding

Underground conductor (primary, neutral, secondary)
Document number of conductors in each circuit (phases), material, and conductor size of each circuit segment through the use of different line styles and legend notes.
Date installed (Date shall be denoted on maps by creating a layer that color codes map sections by date installed; confirmed by interview, as-built drawings, or assumed if no confirming data is available).
Maps shall contain separate overlaying layers: one for primary conductor, and one for secondary conductors.
Maps shall contain an overlaying layer that depicts the location of system deficiencies (by color-coding) such as deterioration; capacity limited sections, excess voltage drop or other deficiencies.
Notes shall be included to document the condition and reasons for its color classification.

Underground services (estimated or confirmed by as-built drawings).
Document location of services, point they contact buildings, the number of conductors in each service, material, and size through the use of either different line styles and legend notes or text labels.
Maps shall contain an overlaying layer that depicts the location of system deficiencies (by color-coding) such as deterioration; capacity limited sections, excess voltage drop or other deficiencies.
Notes shall be included to document the condition and reasons for its color classification.

Electric ductbank, size, number (estimated or confirmed by as-built drawings).
Document number of conduit in each duct bank, material, and conduit size through the use of different line styles and legend notes.
Date installed (Date shall be denoted on maps by creating a layer that color codes map sections by date installed; confirmed by interview, as-built drawings, or assumed if no confirming data is available).
Maps shall contain an overlaying layer that depicts the location of system deficiencies (by color-coding) such as deterioration; capacity limited sections, or other deficiencies. Notes shall be included to document the condition and reasons for its color classification.

Electrical Substations
- Transformers,
Feature ID
Location by symbology
Contain an overlaying layer that depicts deficient components by color coding

- Switchgear, type, manufacturer , ratings, protective devices.
Feature ID
Location by symbology
Contain an overlaying layer that depicts deficient components by color coding

- Voltage regulators, ,.
Feature ID
Location by symbology
Contain an overlaying layer that depicts deficient components by color coding

- Bus.

Feature ID
Location by symbology
Contain an overlaying layer that depicts deficient components by color coding

DATA ITEM DESCRIPTION

Form Approved
OMB NO.0704-0188

1. TITLE	2. IDENTIFICATION NUMBER
INITIAL SYSTEM STUDIES	P015 (Amend 0007)

3. DESCRIPTION/PURPOSE

The Government requires that the contractor perform initial system studies/inspections and develop mathematical models to define and characterize the systems condition and identify system deficiencies. The studies will provide a condition assessment to define the system condition in terms of age and functional state, and verify the current adequacy of the system in terms of capacity, flow, dynamic characteristics (voltage, etc), and system failure protection (faults, etc.). They will be further used to identify the requirements for a seven year plan for system expansions/modifications including (upgrades) necessary to meet the Installation's utility services current needs and future projects.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE

7. APPLICATION/INTERRELATIONSHIP

This Data Item Description (DID) contains the content and requirements for the Initial System Studies for the Government. This DID relates to the System Expansion, Upgrade, and Renewal Plan DID P002 and System Inventory, Condition Assessment, Deficiency Identification, and Valuation DID P001.

8. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER

10. PREPARATION INSTRUCTIONS

The inventory database shall be used to document the deficiencies in narrative form of system components.

10.1 Performance.
System studies will be based on information provided by the Government and gathered by the contractor and shall be performed to the level of detail proposed by the Contractor. All Government provided data should be field verified by the contractor. The contractor's proposal may contain additional study efforts beyond the minimums required herein. As a minimum the contractor shall perform the work included herein but shall also perform study effort proposed in the bid process and as necessary to assessment the system condition and identify deficiencies. The studies shall include a load flow and voltage drop study, a power factor study, and a protective device coordination study, as a minimum.
System models shall determine system conditions for normal feeds and emergency feeds/ties/back-feeds based on peak-demand loading. The contractor shall utilize system maps that have been updated during the system survey to develop model diagrams. The model point designations will reflect the plant system component unique identifiers assigned in the system survey so that the system study results can easily be correlated with the system maps and database.
All of the studies shall be documented and submitted in report format with appendices as necessary. All model input and output electronic files shall be submitted. Single lines/bus-node diagrams shall be provided with the study reports. The studies shall provide input related to system condition and deficiencies. Deficiencies identified by the initial system studies or periodic system studies shall also be noted. The report shall present a summary of the system conditions, configuration, parameters, and descriptions necessary to characterize the system. Component age and observed condition shall be provided, together with an assessment of the remaining useful life that the contractor uses to predict plant unit replacement. The report shall contain a section that documents system and system component deficiencies, citing specific deficiencies (qualitatively and quantitatively), including proposed solutions. This report shall be referenced and be the basis of the contractors System Expansion, Upgrade, and Renewal Plan.

11. DISTRIBUTION STATEMENT

10. PREPARATION INSTRUCTIONS – 10.1 Performance (continued)

10.2 Study Presentation Format. All submittals required under this DID will be itemized on an Engineering Form 4025 attached. Three hard copies and an electronic copy shall be submitted. Electronic files of documents shall be in the most current version of Microsoft and if necessary saved in earlier versions compatible with USMA software. All maps and drawings shall be submitted in ArcView and AutoCAD in a version compatible with USMA's software. The information volume(s) will be provided in three ring binder(s), on 8 ½" x 11" sheets, with separate sections for the study index, study narrative, input data, system parameter results (data), and system maps, digital photos of equipment, and model diagrams. Supporting system maps and system model diagrams shall be provided in full size. The report narrative section shall include a description of the study performance and analysis methodology, key system parameters, and study results. The input data and system parameter results section shall be in tabular form, presented such that the data can easily be correlated to the model diagrams and maps. The system diagrams and maps shall be folded to 8 1/2" x 11" size and placed in the binder(s). Copies of the daily log shall be attached as appendix.

10.3 Submittal Schedule.

An initial study for the utility system shall be provided within six months after contract award. The Government will have a period of 30 calendar days to review and comment on the study documents. The Government and the contractor will meet within two weeks of submission of comments to discuss and resolve the comments (if required).

DATA ITEM DESCRIPTION

Form Approved
OMB NO.0704-0188

1. TITLE	2. IDENTIFICATION NUMBER
ENVIRONMENTAL, HISTORICAL, AND CULTURAL RESOURCES PROTECTION PLAN	P021 (Amend 0007)

3. DESCRIPTION/PURPOSE

The purpose of this Data Item Description (DID) is to state the requirements for the Contractor's environmental, historical, and cultural resources protection plan.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE

7. APPLICATION/INTERRELATIONSHIP

This Data Item Description (DID) contains the content and requirements for the development of an environmental, historical, and cultural resources protection plan.

8. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER

10. PREPARATION INSTRUCTIONS

10.1 The EHCRPP shall be an installation-specific plan that shall describe the contractor's procedures and methods during operations and maintenance activities to minimize pollution, protect and conserve natural resources, restore damage, and control noise and dust within reasonable limits. The EHCRPP shall be approved prior to the start of any operations and maintenance activities.

10.2 Prior to operations and maintenance, the Contractor and the Contracting Officer's Representative (or other onsite Government inspection personnel) shall make an existing condition survey. During this survey, any wetlands, endangered species, special habitat areas, and/or cultural and natural resources shall be identified. The Contractor shall submit a report of the existing environmental conditions and identification/compliance with potential applicable or relevant and appropriate requirements to include but not limited to:

- ***40 CFR "Protection of the Environment"***
- ***49 CFR "Transportation"***
- ***AR 200-1and DA PAM 200-1, "Environmental Protection and Enhancement"***
- ***AR 200-2, "Environmental Effects of Army Actions"***
- ***AR 200-3, "Natural Resources—Land, Forest and Wildlife Management"***
- ***AR 200-4 and DA PAM 200-4, "Cultural Resources Management"***
- ***Installation(s) Spill Prevention Control Countermeasures Plan***
- ***Installation(s) Spill Contingency Plans***
- ***Installation(s) Hazardous Waste Management Plan***
- ***Installation(s) Integrated Natural Resource Management Plan***
- ***Installation(s) Integrated Cultural Resources Management Plan***

10.3 The EHCRPP shall detail the identification and location of all known:

- ***Endangered/threatened species on the Installation.***
- ***Wetlands on the Installation.***
- ***Cultural, archaeological, and water resources on the Installation.***
- ***Existing waste disposal sites on the Installation.***

10.4 The EHCRPP shall detail procedures and methods to protect and/or mitigate the resources/sites identified in Section 10.3 above.

11. DISTRIBUTION STATEMENT

10. PREPARATION INSTRUCTIONS – (continued)

10.5 The EHCRPP shall detail mitigation procedures for the following:

- ***All manifesting, transportation, and disposal of wastes***
- ***Dust and emission control***
- ***Spill control and prevention***
- ***All storage areas and temporary facilities***
- ***Trees and shrubs protection and restoration***
- ***Control of water run-on and run-off***
- ***Minimizing areas of disturbance***

10.6 The Contractor may be required to prepare environmental documentation prior to a project. The Contracting Officer will determine the type of environmental documentation required for each project and site.

10.7 Document Format. All submittals required under this DID will be itemized on an Engineering Form 4025 attached. The Contractor shall provide two complete copies of each document. Three hard copies and an electronic copy shall be submitted. Electronic files of documents shall be in the most current version of Microsoft and if necessary saved in earlier versions compatible with USMA software. The information volume(s) will be provided in three ring binder(s), on 8 ½" x 11" sheets, with separate sections for the study index, study narrative, findings, permit data, and system maps, as applicable. The report narrative section shall include a description of the study performance and methodology, key environmental issues, and study results. Data shall be presented such that it can easily be correlated to the maps. Supporting maps shall be provided in full size, folded to 8 1/2" x 11" size, and placed in the binder(s).